W. W. MASON & C. C. PARKER.

BOTTLE CLOSURE.

APPLICATION FILED MAY 11, 1915.

1,180,864. Patented Apr. 25, 1916.

Fig. 1.

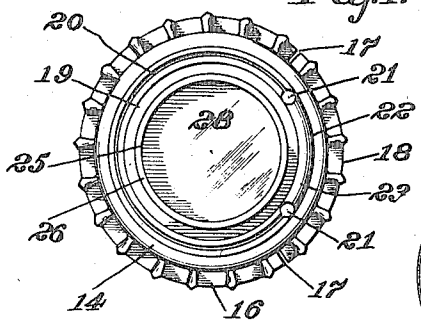


Fig. 3.

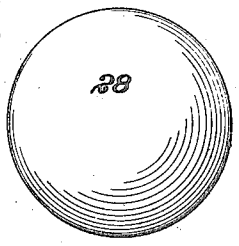


Fig. 2.

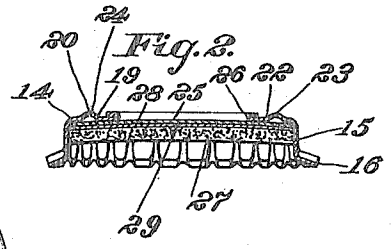


Fig. 7.

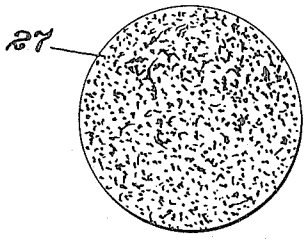


Fig. 4.

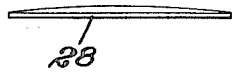


Fig. 5.

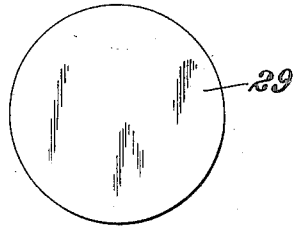


Fig. 8.



Fig. 6.



Fig. 11.

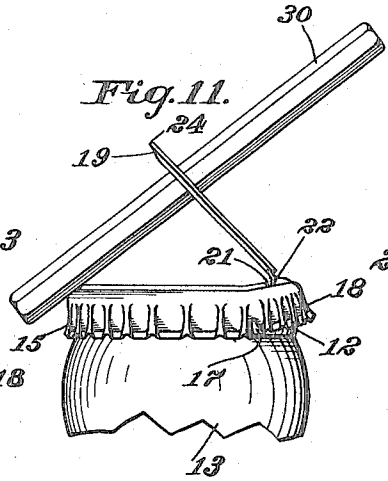


Fig. 10.

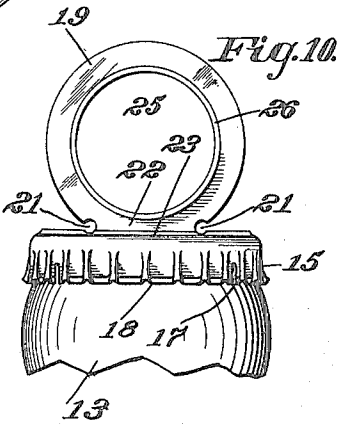
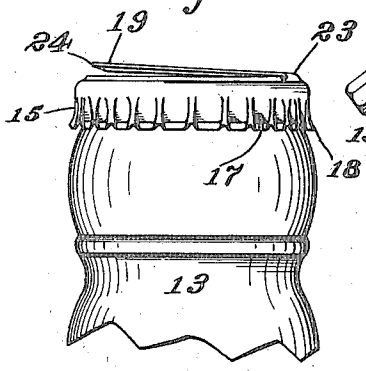


Fig. 9.



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UNITED STATES PATENT OFFICE.

WESLEY W. MASON AND CHARLES C. PARKER, OF BALTIMORE, MARYLAND, ASSIGNORS TO PROTECTIVE CAP COMPANY, A CORPORATION OF DELAWARE.

BOTTLE-CLOSURE.

1,180,864. Specification of Letters Patent. Patented Apr. 25, 1916.

Application filed May 11, 1915. Serial No. 27,313.

To all whom it may concern:

Be it known that we, WESLEY W. MASON and CHARLES C. PARKER, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Bottle-Closures, of which the following is a specification.

This invention relates to improvements in bottle closures and has particular reference to that form of closure having a metallic cap and a corrugated flange to be contracted or otherwise engaged with a shoulder on the bottle neck.

The present invention has for its object to provide an improved construction of crown closure that may be removed from the bottle neck with the aid of any one of numerous devices some one of which is always within reach, and without requiring a special tool shaped to engage the lower edge of the pendant corrugated cap flange.

A further object is to provide an improved cap with a perforated detaching tongue that is formed integrally with the top of the cap and so constructed and reinforced as to prevent rupturing of the tongue during the operation of removing the cap from a bottle neck.

With these and other objects in view the invention is illustrated in the accompanying drawing wherein,—

Figure 1, shows a top plan, a cap constructed in accordance with the invention. Fig. 2, illustrates the same in central vertical cross-section. Figs. 3 and 4, show plan and edge views respectively of one of the disks confined in the cap. Figs. 5 and 6, illustrate plan and edge views respectively of another of the disks preferably employed in the cap. Figs. 7 and 8, show similar views respectively of the cork disk commonly employed. Fig. 9, illustrates a portion of a bottle neck with the improved cap attached thereto. Fig. 10, shows the same but with the detaching ring elevated through which a tool or instrument may be inserted for removing the cap, and Fig. 11, illustrates the cap engaged by a pencil, knife or similar article usually within reach, and which has been operated to partially draw a portion of the cap flange from its engagement with the locking shoulder on the bottle neck.

The cap is designed to engage a locking shoulder 12, on a bottle neck 13, as is common in bottle closures in general use but the invention resides in the novel construction of the cap and the improved means formed therewith for its removal.

The improved cap complete and ready for sealing attachment is shown in Figs. 1 and 2, and is provided with a circular horizontal top flange 14, from which depends an annular flange 15, with an outward-flaring corrugated lower edge 16.

This flaring edge 15, of the depending flange is provided with inwardly-extending slits 17, which latter extend inwardly for a short distance only and leave an unbroken metal connection between the inner ends and the top flange 14, of the cap, whereby to produce a segmental edge section 18, that is free of the major portion of the flaring edge which will serve a useful purpose, presently to be explained.

The top of the cap has a detaching-segment or tongue 19, which is integral with the top flange 14, but which is separated from said top flange by a circular cut or incision 20, that leaves only a minor portion of the segment joined to said flange. At each end of the circular cut or incision, the top of the cap is provided with terminal perforations 21, so that the incision extends in a curved line from one terminal perforation around to the other terminal perforation. It will thus be understood that the detaching segment-tongue 19, is joined to the top flange 14, only by the uncut metal portion 22, left between the two spaced terminal perforations 21, as clearly shown in Figs. 1 and 10, of the drawing, and a reinforcing and strengthening bead 23, is provided in the uncut portion, which bead extends from one terminal perforation to the other.

Preferably the circumferential edge 24, of the segment-tongue is curved outwardly and by this means, access to the edge of the tongue, when the cap is on a bottle, is facilitated.

A perforation 25, is provided in the tongue which perforation is preferably circular in form, and the circumferential edge 26, of this perforation is materially reinforced by the metal thereof being turned back on itself, as clearly shown in Fig. 2 of the drawing. The provision of a perforation 25, in the detaching tongue is impor-

tant, because by means thereof, removal of the cap is to be effected, as will presently be explained.

The particular form of sealing devices provided in the cap are not essential, but in the present instance a compressible sealing disk 27, of cork or equivalent material, is placed therein and a disk 28, is also confined in the cap directly beneath the segmental detaching tongue. In some instances this latter disk may be formed of metal that has a concavo-convex shape so that it may be sprung into place and form an arch directly beneath the perforation 25, in the tongue.

If desired, a lining disk 29, of paper or fabric, and coated with paraffin, may be interposed between the cork and the metallic disks.

The cap is applied to the bottle neck in a manner common to caps that engage a shoulder on the neck, and during such application, the top flange 14, is stretched outwardly and downwardly over the lip of the bottle mouth and its circular cut edge is thereby drawn away from the edge 24, of the detaching tongue, leaving the latter free for engagement by the fingers of a person, as clearly shown in Fig. 9, of the drawing.

To remove the cap, the detaching tongue will be turned up, the uncut metal portion 22, bending to accommodate this turning-up. A pocket-knife, pencil, key or equivalent device 30, may then be passed through the perforation 25, in the tongue with one end seated on the circular edge of the top flange 14, as shown in Fig. 11. Then by using the inserted device as a lever the tongue may be forced forward thereby drawing the segmental section 18, between the slits 17, of the corrugated locking flange upwardly from engagement with the bottle shoulder 12, and thus release the cap from the bottle neck. It will thus be seen that the perforated detaching tongue is so related and connected with the top flange of the cap that ready detachment may be made without requiring the use of a special tool to engage the flange edge under the locking shoulder. Reinforcement of the edge 26, of the tongue prevents the latter from tearing or splitting during removal and the terminal perforations 21, prevent rupturing of the metal from the tongue outwardly.

Having described our invention, what we claim is,—

1. A bottle closure comprising a cap with a depending locking means and also having a top with a curved slit therein and with a circular opening that is partially encircled by the curved slit whereby to form a perforated ring-tongue that is attached to the cap top at one side only, and means extending across the top of the cap at the point of attachment of the tongue and between the opposite ends of the curved slit to prevent rupturing of the metal at the ends of the slit.

2. A metallic retaining device for bottle seals having a depending annular corrugated locking flange with a continuous and unbroken in-turned flange around the top of the locking flange and a ring-shaped tongue open at the center and having a portion of its edge connected with the uninterrupted inturned flange,—the outer circumferential edge of the tongue being curved outwardly and the inner edge of the tongue being folded back on the outer side.

3. A bottle closure comprising a cap having a depending locking flange, a continuous and unbroken annular top flange with spaced-apart perforations therein and a central perforated portion which latter is severed from said top flange by a curved slit narrower than said perforations that extends around said unbroken top flange from one perforation to the other.

4. A bottle closure comprising a cap having a depending locking flange with an outward-flaring corrugated lower edge said corrugated flaring edge being provided with spaced-apart slits,—said closure also having an annular inturned top flange around the upper portion of the locking flange and a ring-shaped detaching tongue in its top which tongue is joined on the top flange at a point between radial lines extending through the slits in the outward-flaring corrugated edge.

5. A metallic retaining device for bottle seals comprising a cap having a depending locking flange, an annular top flange with spaced-apart perforations therein and with a slit in the top that curves from one perforation to the other said top also having a bead that extends from one perforation to the other,—the central part of the top within the curved slit forming a ring-tongue.

In testimony whereof we affix our signatures in presence of two witnesses.

WESLEY W. MASON.
CHARLES C. PARKER.

Witnesses:
CHARLES B. MANN, Jr.,
JOHN W. HEWES.